

Claims

- [1] 1. A four color liquid crystal display comprising:
a plurality of first and second dots arranged in a matrix, each of the first dots including three primary color pixels and each of the second dots including two primary color pixels and a white pixel, each pixel including a pixel electrode and a switching element;
a plurality of gate lines extending in a row direction for transmitting a gate signal to the switching elements; and
a plurality of data lines extending in a column direction for transmitting data signals to the switching elements,
wherein the first dots and the second dots are alternately arranged both in a row direction and in a column direction.
- [2] 2. The liquid crystal display of claim 1, wherein the three primary color pixels in the first dots include red, green and blue pixels.
- [3] 3. The liquid crystal display of claim 2, wherein the two primary color pixels in the second dots include red and green pixels.
- [4] 4. The liquid crystal display of claim 3, wherein the red, green, and blue pixels included in the first dot are arranged in sequence and the red, green, and white pixels in the second dot are arranged in sequence.
- [5] 5. The liquid crystal display of claim 3, wherein the red, blue, and green pixels included in the first dot are arranged in sequence and the red, white, and green pixels in the second dot are arranged in sequence.
- [6] 6. The liquid crystal display of claim 3, wherein the blue pixels and the white pixels are rendered.
- [7] 7. The liquid crystal display of claim 2, wherein the two primary color pixels included in the second dots include green and blue pixels.
- [8] 8. The liquid crystal display of claim 7, wherein the red, green, and blue pixels included in the first dots are arranged in sequence and the white, green, and blue pixels in the second dots are arranged in sequence.
- [9] 9. The liquid crystal display of claim 7, wherein the red, blue, and green pixels included in the first dots are arranged in sequence and the white, blue, and green pixels in the second dots are arranged in sequence.
- [10] 10. The liquid crystal display of claim 7, wherein the red pixels and the white pixels are rendered.

[11] 11. A four color liquid crystal display comprising:
a plurality of first to third dots arranged in a matrix, each of the first dots including red, green, and blue pixels, each of the second dots including red, green, and white pixels, and each of the third dots including green, blue, and white pixels, each pixel including a pixel electrode and a switching element;
a plurality of gate lines extending in a row direction for transmitting a gate signal to the switching elements; and
a plurality of data lines extending in a column direction for transmitting data signals to the switching elements,
wherein the first dots and the second dots are alternately arranged in a row direction, the first dots and the third dots are alternately arranged in the row direction, the first dots are arranged adjacent to each other in a column direction, and the second and the third dots are alternately arranged in the column direction.

[12] 12. The liquid crystal display of claim 11, wherein the red, green, and blue pixels included in the first dots are arranged in sequence, the red, green, and white pixels in the second dots are arranged in sequence, and the white, green, and blue pixels in the third dots are arranged in sequence.

[13] 13. The liquid crystal display of claim 11, wherein the red, blue, and green pixels included in the first dots are arranged in sequence, the red, white, and green pixels in the second dots are arranged in sequence, and the white, blue, and green pixels in the third dots are arranged in sequence.

[14] 14. The liquid crystal display of claim 3, wherein the blue pixels and the white pixels are rendered and the red pixels and the white pixel are rendered.